

### SUPPORT FOR THE AMENDMENT

This Amendment adds new Claims 39-42. Support for the amendments is found in the specification and claims as originally filed. In particular, support for Claims 39-42 is found in independent Claims 1, 15, 26 and 31 and in the specification at least at page 27, line 8 to page 28, line 6. No new matter would be introduced by entry of these amendments.

Claims 1, 5-7, 11-15, 19-20, 24-26, 30-31, 35-36 and 39-42 will be pending in this application. Claims 1, 15, 26 and 31 are independent. Claims 7, 11-14, 20 and 24-25 are withdrawn from consideration pursuant to a Restriction Requirement.

### REQUEST FOR RECONSIDERATION

Applicants respectfully request entry of the foregoing and reexamination and reconsideration of the application, as amended, in light of the remarks that follow.

The present invention is directed to a piston made of aluminum cast alloy having improved thermo-mechanical fatigue resistance. A Ca content of 0.0005-0.003 mass % provides a desirable fine, homogenous microstructure (texture) that is not achieved outside of this range.

Claims 1, 4-6, 15, 18-19, 26, 29-31 and 34-36 are rejected under 35 U.S.C. § 103(a) over RU 2092604C1 ("RU-604") and "Aluminum standards and data 2003" page 1-6.

RU-604 discloses an aluminum-based alloy containing (in wt.%) "at least one other element selected from group comprising bismuth, barium, antimony, calcium, sodium, potassium and strontium 0.03-0.15". RU-604 at English-language abstract.

"Aluminum standards and data 2003" is cited for disclosing the addition of Na, Sr, Ca and/or P to 3xx and 4xx type Al-Si foundry alloys in order to modify the structure; and that 0.005-0.15% Ca and  $\leq 0.060\%$  P are effective modifiers. Office Action at page 3 lines 1-4.

Any *prima facie* case for the obviousness of independent Claims 1, 15, 26 and 31 is rebutted by the significant improvement in homogeneous microstructure (texture) that is achieved by the low Mg (i.e., "Mg (Magnesium): equal to or less than 0.2 mass %") embodiments of independent Claims 1 and 31, and by the medium Mg (i.e., "Mg (Magnesium): 0.2-2 mass %") embodiments of independent Claims 15 and 26, over the range of "Ca (Calcium) : 0.0005-0.003 mass%". See attached Second Declaration Under 37 C.F.R. § 1.132.

The cited prior art fails to suggest the significant improvement in homogeneous texture achieved by the present invention over these ranges of Ca.

Thus, any *prima facie* case of obviousness is rebutted. Therefore, the rejection under 35 U.S.C. § 103(a) should be withdrawn.

Claims 39-42 are also patentable over the cited prior art, because RU-604 (at English language abstract) requires "(in wt%) ... lithium 0.001-0.01, tin 0.005-0.005", which is excluded by the "consisting of" limitation of independent Claims 1, 15, 26 and 31.

Pursuant to M.P.E.P. § 821.04, after independent product Claims 1 and 15 are allowed, Applicants respectfully request rejoinder, examination and allowance of withdrawn method Claims 7, 11-14, 20 and 24-25, which include all of the limitations of product Claims 1 and 15, respectively.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Applicants respectfully request favorable consideration and prompt allowance of the application.

Should the Examiner believe that anything further is necessary in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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Attached:

Second Declaration Under 37 C.F.R. § 1.132

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